

NTPC Comments on Draft Procedure for Grant of Connectivity to Projects based on Renewable Sources to Inter-state Transmission System, 2020.

Clause No	Existing Clause	Suggested Clause	Remarks
2.1(ii)	Central Transmission Utility (CTU), Ministry of New and Renewable Energy (MNRE), Regional Load Despatch centres (RLDCs), State Load Despatch Centres (SLDCs), State Transmission Utility (STUs),and concerned distribution companies and Renewable Energy Implementing Agencies like Solar Energy Corporation of India (SECI)	Central Transmission Utility (CTU), Ministry of New and Renewable Energy (MNRE), Regional Load Despatch Centres (RLDCs), State Load Despatch Centres (SLDCs), State Transmission Utility (STUs),and concerned distribution companies and Renewable Energy Implementing Agencies like Solar Energy Corporation of India (SECI, <u>NTPC etc.)</u>)	NTPC Ltd also designated by CERC as Renewable Energy Implementing Agency (REIA).
<u>6.5</u>	After scrutiny, nodal agency shall intimate the deficiencies in the application, if any, to the applicant within one week of receipt of application. The applicant shall rectify the deficiency within one week thereafter, failing which the application shall be closed and 20% of the application fees shall be forfeited and balance shall be refunded. If the rectified application is received from the applicant after 2400 hrs of the last day of the month in which application is made, application shall be deemed to have been made in subsequent month and shall be processed accordingly.	After scrutiny, nodal agency shall intimate the deficiencies in the application, if any, to the applicant within one week of receipt of application. The applicant shall rectify the deficiency within <u>six</u> weeks thereafter, failing which the application shall be closed and 20% of the application fees shall be forfeited and balance shall be refunded. <u>Similarly if applicant withdraws stage-I application before Stage-I connectivity intimation due to any reason then, balance shall be refunded after deducting 20% of the application fees, provided that identified bays can be allocated to other applicant.</u> If the rectified application is received from the applicant after 2400 hrs of the last day of the month in which	1. Especially in PSU sometimes, some correction in application requires board approval which takes more than one month and applicant unable to meet one week time for correction. This does not affect normal proceedings of CTU but the applicant shall get enough time for correction. 2. In case any applicant withdraw its Stage-I application before grant of Stage-I connectivity Intimation, There should be an option for Refund of partial application fees to applicant. This shall be applicable in case study done for applicant may be applicable to new applicant. This type of case are very rare and may be allowed to refund 80% fees as applicable.

		application is made, application shall be deemed to have been made in subsequent month and shall be processed accordingly						
7.7 : Table-1	Sl. No.	Voltage Level	Minimum Capacity of the Dedicated Transmission Line (per circuit)	Sl. No.	Voltage Level	Minimum Capacity of the Dedicated Transmission Line (per circuit)	Maximum Capacity of the Dedicated Transmission Line (per circuit)	If the maximum capacity per circuit also mentioned in the procedure, then applicant can plan the transmission system accordingly and quote in competitive bidding accordingly. As some projects similar capacity have already been allotted to applicant by CTU and it shall be beneficial to applicant from cost effective planning of solar plant evacuation.
	1	132 kv	80MW*	1	132 kv	80MW*	80MW	
	2	220/230 kv	300MW	2	220/230 kv	300MW#	400MW	
	3	400 kv	900MW	3	400 kv	900MW	1250MW	
7.7 : Table-1	Sl. No.	Voltage Level	Minimum Capacity of the Dedicated Transmission Line (per circuit)	Sl. No.	Voltage Level	Minimum Capacity of the Dedicated Transmission Line (per circuit)	Maximum Capacity of the Dedicated Transmission Line (per circuit)	Minimum capacity with which applicant can apply ISTS connectivity is 50MW. However the Minimum capacity of dedicated transmission line fixed as 300MW. This shall cause uneconomical transmission line design specially where solar potential is comparatively less and less number of developer in that area. There is no rush among the developers for ISTS bay in that area and it is difficult for 50 MW solar plant developer to find other developer to share the transmission line within scheduled time. In case transmission capacity is relaxed, then developer may also find economical advantage to set up plant in non-REZ area. It may create development of solar plant in all places of India.
	1	132 kv	80MW*	1	132 kv	80MW*	80MW	
	2	220/230 kv	300MW	2	220/230 kv	300MW#	400MW	
	3	400 kv	900MW	3	400 kv	900MW	1250MW	
				# <u>Minimum capacity of 220/230 kv transmission Line may be relaxed by CTU in case renewable plants are located in non-REZ (Renewable Energy Zones) area.</u>				
9.2.1 (a)	Provided that			Provided that				REIA generally applied the stage-I connectivity on behalf of other developers.

	<p><i>(a)Such entity is a grantee of Stage-I connectivity or has applied for Stage-I Connectivity or has applied for Stage-I Connectivity and Stage-II Connectivity simultaneously.</i></p>	<p><i>(a)Such entity is a grantee of Stage-I connectivity or has applied for Stage-I Connectivity or has applied for Stage-I Connectivity and Stage-II Connectivity simultaneously.</i></p> <p><u>(aa) In case stage-I connectivity granted to REIA, then the developer who has received Letter of award from REIA within that granted stage-I connectivity, can also apply stage-II connectivity partially or fully. REIA shall provide consent letter to stage-II connectivity applicant which shall be submitted alongwith stage-II application.</u></p>	<p>REIA shall issue LOA to Developers only after TBCB.As the developers received LOA, they are entitled for stage-II connectivity, for which REIA already taken stage-I connectivity. In case stage-II connectivity to REIA, then there is a need to transfer the connectivity to developer afterwards. If developers under REIA are allowed to apply for stage-II connectivity, then unnecessary requirement of transfer requirement not required at later stage. Connectivity principal regulation clause: 8A about transfer of connectivity not very clear in this case.</p>
<p>9.2.1 (b) <u>Illustration</u> <u>(b)</u></p>	<p><i>Suppose a bidder is awarded LOA for 500 MW under Round the Clock Hybrid Scheme with projects at multiple locations - 500 MW (Solar) in State „A“ and 700 MW(Wind) in State „B“. Such project shall be eligible for Stage-II Connectivity under Clause 9.2.1, for the capacity of the project not exceeding the quantum of LOA (500 MW in the instant case) at each location on the basis of same LOA. If the said project intends to sell surplus power over and above the quantum for which Stage-II Connectivity has been granted under Clause 9.2.1, it shall be required to apply for</i></p>	<p><i>Suppose a bidder is awarded LOA for 500 MW under Round the Clock Hybrid Scheme with projects at multiple locations - 500 MW (Solar) in State „A“ and 700 MW(Wind) in State „B“. Such project shall be eligible for Stage-II Connectivity under Clause 9.2.1, for the capacity of the project not exceeding the quantum of LOA (500 MW in the instant case) at each location on the basis of same LOA. If the said project intends to sell surplus power <u>(i.e. 200MW)</u> over and above the quantum for which Stage-II Connectivity has been granted under Clause 9.2.1, it shall be required to apply for additional Connectivity under Clause 9.2.2.<u>In this case single metering point of whole 700MW is also allowed in</u></i></p>	<p>For RTC tender with thermal plant with renewable and renewable-renewable, it is not always possible to identify separate metering points of two connectivity with same transmission system. In case of thermal plant the single unit are 500/660/800MW and partial capacity of it can be used for RTC tender and partial for 3rd party sale. This shall enable applicant with existing capacity to participate in RTC tender.</p>

	<i>additional Connectivity under Clause 9.2.2.</i>	<u>case it is not possible to segregate power injection from two connectivity.</u>	
<u>9.2.2</u>	<i>(i)Ownership or lease rights or land use rights for 50% of the land required for the capacity of Stage-II connectivity; and (ii) Financial closure, of the project (with copy of sanction letter) or release of at least 10% funds towards generation project execution of the project cost including the land acquisition cost through equity, duly supported by Auditor`s certificate.</i>	<i>(i)Ownership or lease rights or land use rights for 50% of the land required for the capacity of Stage-II connectivity; and (ii) <u>Achievement of Financial closure</u> (with copy of sanction letter) or release of at least 10% funds towards generation project execution of the project cost including the land acquisition cost through equity, duly supported by Auditor`s certificate.</i>	Again as per Solar park /UMREPP policy, park necessary land and evacuation is developed by Implementing agency and solar project is being developed by various developers and Implementing agency apply for grid connectivity. Financial closure of only their part of projects shall be ensured by Implementing Agency. Earlier clause related to financial closure may be retained as it shall adversely affect development of MNRE’s Solar park/UMREPP projects.
<u>10.10 (a)</u>	<i>..Provided that Conn-BG 2 shall not be payable if the grantee constructs the bay by itself or is granted a bay which is already allocated to other applicant(s);</i>	<i>..Provided that Conn-BG 2 shall not be payable if the grantee constructs the bay by itself or is granted a bay which is already allocated to other applicant(s); <u>However, in case grantee constructs the bay at ISTS s/s, then 5% of Conn-BG2 value shall be applicable as consultancy/supervision charge to Transmission Licensee.</u></i>	When applicant constructs bay at ISTS bay which is allotted to applicant, then applicable fees/ charges other than bay cost and O&M cost may be mentioned in the Regulation/procedure for applicant information/clarity to proceed with bay at ISTS end .The normative amount 5% of value of Conn-BG 2 is reasonable as only technical documentation approval and supervision of erection & commissioning is required.

<p>11.4</p>	<p><i>On a specific request of Connectivity grantee(s) and for the purpose of optimal utilisation of transmission infrastructure, CTU may, after consultation with the Connectivity grantee(s) concerned, carry out rearrangement or shifting of the Connectivity across different bay(s) of the same substation.</i></p>	<p><i>On a specific request of Connectivity grantee(s) and for the purpose of optimal utilisation of transmission infrastructure, CTU may, after consultation with the Connectivity grantee(s) concerned,</i></p> <p><i>(i) carry out rearrangement or shifting of the Connectivity across different bay(s) of the same substation.</i></p> <p><i>(ii) <u>Co-ordinate among various developers for finalization of D/C or M/C towers near ISTS substation.</u></i></p> <p><i><u>CTU also may carry out rearrangement of bay(s) of the same substation after allocation of all bay(s) to arrange bay(s) on basis of SCOD of the renewable project if needed.</u></i></p>	<p>(i)CTU may rearrange/give a final look on the bay in a substation considering SCOD date of each project, even after stage-II allocation done as allocation is done based on first cum first serve basis of applications. If the ISTS bays are allotted as per SCOD of the project, it shall be beneficial to applicant and CTU both from point of view of overall planning, optimization and ISTS bays commissioning schedule.</p> <p>(ii)As the transmission line near ISTS s/s has to be in D/C or M/C tower, CTU may co-ordinate with all developers as project details of the all developer is available to CTU centrally. CTU as statutory body may provide direction all developers in this regard to avoid any conflict among them.</p>
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OTHER IMPORTANT COMMENT:-

1. Separate Provision for RE projects connectivity for Solar Park and Ultra Mega Renewable Energy power projects(UMREPP) under MNRE scheme in RE connectivity procedure:-

MNRE had outlines development of 40GW renewable capacity through Development of Solar park and Ultra Mega Renewable Energy power projects (UMREPP) throughout the country (order No. 30/26/2014-15/NSM) and the development of solar park/UMREPP is fully monitored by MNRE, GoI for achieving GoI RE target within scheduled timeline.

As per MNRE policy and Guideline of the Solar Park/UMREPP scheme, Renewable Power Park Developer /Implementing Agency shall develop the land and evacuation system and Solar/wind project developers shall install the solar/wind project with the park and Connectivity for the solar park/UMREPP shall be applied by notified Implementing Agency/Renewable Power park Developer.

Detailed project report (DPR) of the concerned Solar Park/UMREPP must be approved by MNRE before implementation of the Solar Park/UMREPP. Therefore, grant of the stage-II connectivity for Solar Park/UMREPP becomes most essential input to finalize DPR of Solar Park or UMREPP so as to keep provision for internal /dedicated evacuation system. Therefore park developer should be entitled to submit stage-II connectivity application and thereby grant of Stage-II connectivity should be permitted on the basis of administrative approval/consent letter to Implementing Agency (Renewable Power Park Developer) for the concerned Solar park/UPREPP. After getting stage-II connectivity, DPR approval can only be obtained for solar park/ UMREPP from MNRE.

Therefore, suitable separate provision for grant of connectivity for solar park may be included in RE connectivity procedure. However, in order to ascertain the progress of the park development, land ownership clause as mentioned in clause 9.2.2(i) in existing Re connectivity procedure, may be sought from applicant. The following may be added as clause 9.2.3 for connectivity of Solar Park/UMREPP;

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9.2.3 An approved Implementing Agency by MNRE for development of identified/notified Solar Park/UMREPP who is a grantee of Stage-I Connectivity or who has applied for grant of Stage-I Connectivity or has applied for Stage-I Connectivity and Stage-II Connectivity simultaneously, and is not covered under Clause 9.2.1 and 9.2.2 above, and having has achieved the following milestones:
(i)Ownership or lease rights or land use rights for 50% of the land required for the capacity of Stage-II connectivity; and
(ii) Consent letter to applicant from MNRE for developing the identified Solar Energy Park/ UMREPP (Ultra Mega Renewable Energy Power plant) as per MNRE policy as an Implementing Agency.

Unquote

2. Provision for RE projects connectivity through the existing Switchyards of thermal Plants and inclusion in RE connectivity procedure:-

ISGS switchyards are constructed by the generators (Gencos) who also operate and maintain them. These switchyards forms as integrated part of ISTS transmission system connected though ISTS lines . To meet GoI RE target within scheduled time and optimize transmission asset by using margin in existing ISTS transmission capacity connected through Generating switchyard, it may be prudent to explore the possibility of granting RE project connectivity for renewable power evacuation through electrical system of existing Genco-Switchyard connected to ISTS system/Line.

Presently as per Connectivity regulation , Connectivity provision through existing electrical system of Genco- Switchyard exists only for projects owned by concerned Gencos.

Hence, in order to avail power margins available in existing ISTS lines from Gencos-Switchyard, the following regulatory provision may be provided for aggregating RE capacity through Gencos-switchyard by REIA.

Following may be required for enabling RE connectivity to Genco-Switchyard -

- (i) CTU may intimate all ISGS regarding margins available in the power flow from outgoing lines connected to the grid so that ISGS can float tender as REIA. Such switchyards should be considered as ISTS points for connectivity.
- (ii) In this manner ISGS generating switchyard would be facilitating additional points of connectivity and helping RE integration.
- (iii) Thereafter, Developer shall directly apply for required stage-I and stage-II connectivity to CTU after NOC from ISGS. The connectivity should be granted in line with ISTS connectivity procedure.
- (iv) As per RE regulation, the cost of connectivity at ISTS substation forms part of ISTS and not loaded to developer. Accordingly, the required bay augmentation work as required should also form part of ISTS infrastructure and should be kept under ISTS scope.
- (v) All operational and commercial responsibilities as per IEGC shall be under Renewable power Developer's scope as the same is followed in case of renewable developer connected with ISTS substation.

3. Waive-off the requirement of fit-for-purpose models of Solar farms/ parks connected to Indian grid as per Format CON-4 of RE connectivity procedure for solar / wind plant of capacity less than 100MW :-

As per Detailed Procedure for "Grant of Connectivity to projects based on Renewable Sources, fit-for-purpose model of the Solar /wind plant connected to ISTS grid point and related various dynamic study being performed. However, it is not economical to do all the study for solar/wind project of less than 100MW directly connected to ISTs grid point. As per clause (b)(i)(e) to (cc connectivity regulation'2009 and its 7th amendment, solar/wind project capacity above 5 MW developed by generating company are allowed to be connected to existing connection point with inter-State Transmission System through the electrical system of the generating station (i.e. 33/132 /220 kV) subject to availability of Connectivity capacity in existing station as assessed by CTU. Therefore, the requirement of fit-for-purpose model (PSS/E) and related dynamic study may be waived off for such kind of project of less than 100MW capacity.